REMARKS

Applicants have added new claim 3. Claims 1-3 are now pending in the application.

The Abstract was objected to in the Office Action for being excessively long and for not being in narrative form, as required by MPEP section 608.01 (b). Applicants have amended the Abstract to place it incompliance with the MPEP. The disclosure was objected to for containing legal terms and other informalities. Applicants have amended the specification to correct the informalities. No new matter was entered.

In the Office Action, claim 1 was rejected under 35 U.S.C.102(b) as anticipated, or alternatively, under 35 U.S.C. 103(a) as being obvious over Toda et al. (U.S. 6,363,799). Claim 2 was rejected under 35 U.S.C.102(b) as anticipated by JP 2000-168306.

With respect to claim 1, applicants respectfully traverse the rejections. As recited in claim 1, the outer diameter of a portion of the hub end portion to be plastically deformed is made smaller than the diameter of the portion of the inner ring element that is fitted on the hub. The start point of the small diameter portion of the hub end portion is located between the start point of a chamfered portion on the inner circumferential surface of the inner ring element, and the vehicle center side end face of the inner ring element. The end portion of the hub end portion is plastically deformed radially outwardly, to fasten and

secure the inner ring element. These elements are described in the specification, for example with respect to Figs. 3a-3c and 4, and on pages 13-16.

In contrast, Toda et al. describes a bearing device and method for measuring axial force, in which a hub unit A includes a hub wheel 1 to which is mounted a double row of ball bearings 2. (Fig. 1.) The hub wheel 1 includes an annular flange 11, and the ball bearings 2 include an inner ring 21, an outer ring 22 , a plurality of balls 23 and a crown shaper retainer 24. (Col. 5, lines 6-17.)

As shown in Figs. 3-6, in the case of the rolling of the forging tool 90 shown in Fig. 3, the diametrically outward component of force becomes a maximum. In Fig. 3, the starting point 3d of the small-diameter portion 3c is located closer to the axially center portion than the chamfering-starting point 21b. Thus, as shown in FIGS. 3 and 4, the shaft end 3c2 is deformed diametrically outward such that the junction 3cl of the small-diameter portion 3c is extended. A diametrically outward component of force is not applied to the inner ring 21 because the small-diameter portion 3c is not in contact with the inner ring 21, thus the inner ring 21 is not deformed. (Col. 6, lines 30-42.)

The entire junction 3cl of the small-diameter portion 3c and a portion of the shaft end 3c2, shown in Fig. 5, are in contact with the angled portion 21a of the inner ring 21. The axially central side component of force is not applied to the inner ring 21 as a deformation effort, which impairs the circularity of the inner ring 21. Therefore, the inner ring 21 is not deformed by this caulking, and the caulking portion 3a is caulked on the end face of the inner ring 21 as the caulked portion 3 as shown in Fig. 6. (Col. 6, lines 44-54.)

Because of these differences between the structure described in Toda et al. and the structure recited in claim 1, the deformation of the claimed inner ring element can be made smaller according to the invention in comparison to the structure of the cited reference. Applicants thus respectfully submit that claim 1 is not anticipated nor rendered obvious by Toda et al.

Claim 3 depends form an allowable claim, and at least for that reason is also submitted to be allowable. In addition, the advantage of the claimed structure is enhanced by use of the recited numerical range, which is described in greater detail in the specification, for example on page 12, lines 21-27.

Claim 2 of the present invention recites a hub unit that has a continuous circumferential groove that is provided on the inner circumferential surface of the inner ring element, at an axially more vehicle center side than the second bearing track. The elements of claim 2 are shown in greater detail in the specification, for example with reference to Figs. 8A to 8D. As claimed, the portion of the inner ring element has a thickness in the radial direction of the inner ring element that is larger than that of the portion of the inner ring element at which the second bearing track is formed. As a result of this configuration, the deformation of the inner ring element can be made smaller.

In contrast, the Japanese reference JP 2000-168306 does not describe or suggest a structure of a hub unit that provides for a smaller deformation of an inner ring element, as claimed. Accordingly, applicants respectfully

submit that claim 2 is not anticipated by the cited reference, and is allowable.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #038919.58166US).

Respectfully submitted,

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